Remarks

In an office action dated 19 December 2001, the Examiner rejects claims 1-18 (all pending claims). Applicants amend claims 1-6, 10-16, and 18. Applicants also respectfully traverse the rejections. Claims 1-18 (all pending claims) remain in the application. In light of the amendments and below remarks, Applicants respectfully request that the Examiner allow this application.

Claims 2-9 and 11-15 have been amended to correct typographical and editorial errors to the claims.

In the office action, the Examiner rejects claim 1 as being unpatentable under 35 U.S.C. 102 (e) as being anticipated by U.S. Patent Number 6,226,644 issued to Ciscon et al. (Ciscon). Amended claim 1 recties a database systems that receives a request from a subsystem to register for notification of a change to configuration data stored in the database subsystem and registering the subsystem for notification. Ciscon does not teach registering subsystems for notification of changes to configuration data. Instead, Ciscon teaches system that allows process to register to receive data transmitted between applications across a network (See Colum 7, line 25- Column 9, line 62). In Cison, an application or router object registers an interest in receiving data having a certain property, such as sent from a particular address (See Column 9, lines 22-62). This is different from registering a request for notification of changes to data stored in a database as is recited in amended claim 1. For this reason, applicants respectfully request that claim 1 be allowed.

Amended claims 2-9 are dependent upon amended claim 1. Therefore, claims 2-9 are allowable for the same reasons as amended claim 1 and all other rejections to claims 2-9 are moot. Thus, Applicants respectfully request amended claim 2-9 be allowed.

Amended claim 10 claims a device tangibly embodying the method recited in amended claim 1. Thus, amended claim 10 is allowable for the same reason as amended claim 1. Therefore, Applicants respectfully request that amended claim 10 be allowed.

Amended claims 11-15 are dependent upon amended claim 10. Thus, amended claims 11-15 are allowable for at least the same reason as amended claim 10. Therefore, Applicants respectfully request that amended claims 11-15 allowed.

Amended claim 16 recites a database subsystem that includes a notification unit that notifies registered subsystems when a change to router configuration

information is made. Therefore, amended claim 16, like amended claim 1, is allowable of Ciscon and Applicants respectfully request that amended claim 16 be allowed.

Claim 17 is dependent upon amended claim 16. Thus, claim 17 is allowable for the same reason as amended claim 16 and Applicants request claim 17 be allowed.

Amended claim 18 recites a memory storing instructions and a processor executing the instructions which provide the router operating system recited in amended claim 16. Thus, amended claim 18 is allowable for at least the same reason as amended claim 16 and Applicants respectfully request that amended claim 18 be allowed.

If the Examiner has any question regarding this amendment or this application in general, the Examiner is invited to call the undersigned at 775-886-9500x114.

Respectfully submitted,
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APPENDIX: MARKED-UP CLAIMS

1. (Amended) A method for transacting router notification of changes to router configuration data using a database subsystem, said database subsystem storing said router configuration and being operatively coupled for communication with a plurality of router subsystems, comprising:

(a) transmitting a notification registration request by a first [subsystem] of said plurality of subsystems to said database [system] subsystem, said registration request indicating configuration data for which said first subsystem [would like] requires registration for notification of changes to said configuration data;

(b) receiving said notification registration request by said database [system] subsystem; and

(c) registering said first [subsystem] of said plurality of subsystems for notification by said database subsystem.

2. (Amended) The method of claim 1 further comprising maintaining said router configuration data using a tree structure having a plurality of tuples by said database [system] subsystem.

3. (Amended) The method of claim 2 wherein said registering said first [subsystem] of said plurality of subsystems for notification further comprises:

(a) finding a requested tuple storing said configuration data for which notification is requested; and

(b) setting the notification flag for said requested tuple.

4. (Amended) The method of claim 3 wherein said registering said first [subsystem] first of said plurality of subsystems for notification further comprises:

(a) determining whether said notification registration request included a request for notification of a name space; and

(b) setting a notification flag for children nodes of said requested tuple [if determining step determines] responsive to a determination that said notification registration request included said notification of a name space.

5. (Amended) The method of claim 1 further comprising:

(a) transmitting a notification unregistration request by said first of said plurality of subsystems to said database [system] subsystem, said unregistration request indicating the configuration data for which said first subsystem [would like] requires unregistration of said notification;

(b) receiving said notification unregistration request by said database [system] subsystem; and

(c) unregistering said first [subsystem] of said plurality of subsystems for notification by said database subsystem.

6. (Amended) The method of claim 1 further comprising:

(a) transmitting a router configuration transaction request by a second [subsystem] of said plurality of subsystems to said database [system] to said plurality of subsystems;

(b) receiving said router configuration transaction request by said database [system] subsystem;

(c) carrying out said requested transaction by said database [system] subsystem, said transaction [affecting] changing said router configuration data maintained by said database [system] subsystem;

(d) determining [which] each of said plurality of subsystems [are] registered for notification [for] of changes to said router configuration data; and

(e) notifying said each of said plurality subsystems [which] determined to be [registers] registered for notification [for] of changes to said router configuration data.

7. The method of claim 6 wherein said router configuration transaction request is a create request.

8. The method of claim 6 wherein said router configuration transaction request is a delete request.

9. The method of claim 6 wherein said router configuration transaction request is a modify request.

10. (Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for

transacting router notification using a database subsystem, said database subsystem storing router configuration data and being operatively coupled for communication with a plurality of router subsystems, said method comprising:

(a) transmitting a notification registration request by a first [subsystem] of said plurality of subsystems to said database [system] subsystems, said registration request indicating configuration data for which said first [subsystem would like] of said plurality of subsystems requires registration for notification of changes to said configuration data;

(b) receiving said notification registration request by said database [system] subsystem; and

(c) registering said first [subsystem] of said plurality of subsystems for notification by said database.

11. (Amended) The program storage device of claim 10, and method further comprising:

maintaining said router configuration data using a tree structure having a plurality of tuples by said database [system] subsystem.

12. (Amended) The program storage device of claim 11, wherein said registering said first [subsystem] of said plurality subsystems for notification further comprises:

(a) finding a requested tuple for which notification is requested; and

(b) setting the notification flag for said requested tuple.

13. (Amended) The program storage device of claim 12, wherein said registering said first subsystem for notification further comprises:

(a) determining whether said notification registration request [included] includes a request for notification of a name space; and

(b) setting a notification flag for children nodes of said requested tuple [if said determining step determines] responsive to a determination that said notification registration request [included] includes said notification of a name space.

14. (Amended) The program storage device of claim 10, said method further comprising:

(a) transmitting a notification unregistration request by said first [subsystems] of said plurality of subsystems to said database [system] subsystem, said unregistration request indicating the configuration data for which said first [subsystem would like] of said plurality of subsystems requires unregistration;

(b) receiving said notification unregistration request by said database [system] subsystem; and

(c) unregistering said first [subsystem] of said plurality of subsystems for notification by said database subsystem.

15. (Amended) The program storage device of claim 10, said method further comprising:

(a) transmitting a router configuration transaction request by a second [subsystem] one of said plurality of subsystems of said database [system] subsystem;

(b) receiving said router configuration transaction request by said database [system] subsystem;

(c) [(d)carrying out] performing said requested transaction by said database [system] subsystem, said transaction [affecting] changing said router configuration data maintained by said database [system] subsystem;

(d) [(e)] determining [which] each of said plurality of subsystems [are] registered for notification [for] of changes to said router configuration data; and

(e) [(f)] notifying each of said plurality of subsystems [which are] determined to be registered for notification [for] of changes to said router configuration data.

16. (Amended) A router operating system comprising:

(a) a database subsystem;

(b) a plurality of client subsystems, each operatively coupled to said database subsystem; and

(c) a database operatively coupled to said database [system] subsystem to store router configuration information, said database [system] subsystem further comprising a notification unit, said notification unit configured to provide notification of changes to router configuration information to each of said plurality of subsystems registered to receive notification of changes to said router configuration information.

17. The router operating system of claim 16 wherein said database is structured and configured as a tree database.

18. (Amended) In a router device having a processor and memory, a router operating system [executing within] stores as instructions in said memory [comprising] and executed by said processor, said router operating system comprising:

(a) a database subsystem;

(b) a plurality of client subsystems, each operatively coupled to said database subsystem; and

(c) a database operatively coupled to said database subsystem and that [store] stores router configuration information, said database [system] subsystem further comprising a notification unit, said notification unit configured to provide notification of changes to said router configuration information to each of said plurality of client subsystems registered to receive notification.